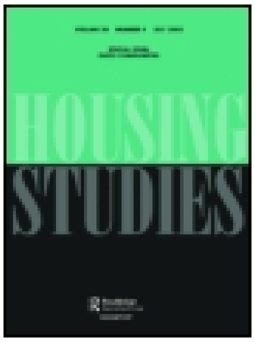

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Home or hotel? A contemporary challenge in the use of housing stock

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ABSTRACT
Since the Global Financial Crash, there have been significant changes to the private rented sectors across the UK. The PRS has become increasingly important to providing housing to millions of homes and has gained increasing political and regulatory focus. At the same time, there has been a substantial increase in the number of short-term holiday lets enabled by online platforms such as Airbnb. There are concerns that this housing stock is being lost from residential housing and exacerbates issues of housing equality. This paper undertakes a case study of Airbnb growth in London to examine changes in listings and provides insight into Airbnb hosts. The extant literature and analysis in this paper support the argument of the loss of privately rented properties, with housing stock being reallocated as tourist accommodation, potentially displacing local communities. Finally, the paper analyses the struggles this poses for policymakers, communities and housing providers.

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Sharing economy; Airbnb; private landlords; private rented sectors; property investment

1. Introduction

Technology platforms such as Airbnb has generated a 'gold rush' of short-term letting activity across the UK. The English Housing Survey 2017–2018 identified that approximately 2.8 million households across England, including 640,000 households in London, had casually let part or all of their entire home on these platforms (MHCLG, 2019a). The growth in short-term letting activity has led to concerns about the impact on housing availability and affordability (Cromarty & Barton, 2018; Ferreri & Sanyal, 2018; Killick, 2015). Of particular concern is the effect on the supply of longer-term rentals (LTRs) for private renters, with private landlords investing in short-term rentals (STRs) (Barron *et al.*, 2021; Simcock, 2017). Platforms such as Airbnb enable property owners to access a global customer base at higher rents (Wachsmuth & Weisler, 2018), remove rental stock and worsen housing

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affordability (Crommelin *et al.*, 2018; Gurran & Phibbs, 2017; Horn & Merante, 2017; Wachsmuth *et al.*, 2018).

While recent studies have focused on the growth of STRs and the impact on housing markets or the tourism industry, there are calls for greater regulatory or fiscal policy changes to counter the adverse effects of this growth. There is a consensus based on snapshots of letting activity on the likely degree of commercial activity; however, to develop and determine appropriate policy responses, there is a need to understand in a greater depth how property is being shared on a commercial basis and, importantly by *whom*. This paper aims to provide a greater understanding of who is operating STRs on Airbnb. Firstly, this paper provides an examination of the growth of investment in property in England, from the private rented sector to the rise of Airbnb and short-term letting platforms. This paper then discusses the policy and regulatory changes in the UK private rented sector that could be contributing to landlords choosing STRs over LTRs. Finally, this paper provides a quantitative analysis of Airbnb listings in London over five years to understand the possible commercial use of property and, importantly, to shed more light on the dynamics of those operating on this platform.

2. Growth in property investment and landlordism in the UK

Our use and ownership of housing stock across the UK and worldwide has been in a state of flux. Following declines in rental property and growth of homeownership in the early twentieth century, the last thirty years have seen a significant change in the number of households in England that rent from a private landlord, at a faster rate than the total increase in housing stock (Jones *et al.*, 2018). Since the global financial crash in 2007/08 the sector has increased by approximately 50% and now provides housing to around 4.6 million households (MHCLG, 2019a).

This increase is attributed to the rise in the number of small-portfolio private landlords (Ronald & Kadi, 2017), enabled by a myriad of economic, regulatory and political changes since the late 1980s. This includes the deregulation of rents and the introduction of the assured shorthold tenancy (1988), development of the buy-to-let mortgage (1996), but also the limiting of high loan-to-value mortgages for first-time buyers immediately after the financial crash in 2007/08 (Constantinou & Fenton, 2017; Scanlon *et al.*, 2015; Whitehead & Williams, 2018). The most recent English Private Landlord Survey of 2018 (MHCLG, 2019b) has found that there has been a consolidation of property ownership in the PRS; the number of portfolio landlords has grown since 2020, from 22% to 55%, and these now operate 79% of the properties in the sector. The strengthening of property-based welfare strategies by landlords (Kemp, 2015; Soaita *et al.*, 2017) is argued to increase housing inequalities, between those with housing security and those without (Byrne, 2019; Hulse *et al.*, 2019; Ronald & Kadi, 2017), across social-economic and intergenerational divides (Hoolachan & McKee, 2019; McKee & Soaita, 2018).

The continued financialisation of housing stock, the difficulties for 'generation rent' to access homeownership, and the growing political capital of private renters has not gone unnoticed, with all political parties placing more focus on the private rented sector (Whitehead & Williams, 2018). Governments across the UK have introduced or announced measures to improve security of tenure (i.e. removal of 'no fault' evictions), improve affordability (i.e. banning of letting agent fees and capping deposits), and improve standards (i.e. increase in licensing and registration schemes and new enforcement powers).

Along with increasing regulatory focus, the UK Governments since 2015 have announced significant fiscal policies to reduce further investments in the private rented sector and make the tax system 'fairer' (HMRC, 2017). These measures include the additional 3 per cent levy on Stamp Duty Land Tax for additional properties, the restriction of finance cost relief for individual private landlords, and the replacement of the fixed 10% wear and tear allowance with the Replacement of Domestic Items Relief (RDIR). While most of these tax changes are unlikely to negatively affect landlords with one property (Scanlon & Whitehead, 2016), the effect has been more severe for larger portfolio landlords (Jones *et al.*, 2018). Research that predominantly sampled portfolio landlords identified that 70% of landlords reported the tax changes would reduce their profitability, with 62% reporting this would be reduced by at least 20% (Simcock, 2018). Over the past three years, the proportion of mainly portfolio landlords seeking to sell properties has increased (Simcock & Kaehne, 2019). Some landlords are changing letting strategies, such as restricting access to lower-income benefit claimant households due to the increased financial risks (Pattison, 2017).

These changes in taxation policy have occurred simultaneously as the deregulation of the short-term holiday let market in London with the *Deregulation Act 2015*, and the global growth in popularity of short-term let platforms such as Airbnb. Furthermore, the changes to the restriction in finance cost relief (i.e. mortgage interest relief) do not apply to holiday lets. Therefore, property investors can still claim the full tax relief for their finance costs (subject to a minimum usage of the property as a holiday let) if they let the property out as an STR. This would make an STR more tax favourable and profitable for a property investor over the long-term residential market. Wachsmuth & Weisler (2018) developed the rent-gap theory for Airbnb and similar platforms. This provides a theoretical foundation for why private landlords may seek to engage in the STRs over LTRs. Wachsmuth & Weisler (2018) identify that property owners move into the STR sector over LTRs due to the prospect of higher rents with little capital investment. Roberts & Satsangi (2020) identify that a core argument against increasing regulation of the private rented sector is that this increases costs across the whole sector. Regardless of whether the regulation increases the cost of renting out a property, landlords likely perceive that changes will lead to increased costs and will influence the decision making of landlords, as identified in surveys of private landlords (see for example Simcock, 2018). Based on the literature identified above, the taxation changes for LTRs have increased costs for those with more extensive portfolios. Building upon Wachsmuth and Weisler's rent gap theory, these taxation changes can be argued to widen the gap between the current rental profit as an LTR and the achievable rental yield as an STR, making the STR more attractive to property investors. There is emerging evidence to support this, with 7% of private landlords in London reporting switching to STRs in 2017, with one-third of these landlords reporting the increased cost of tax changes as a contributing factor (Simcock, 2017).

3. Rise of the 'sharing economy' and Airbnb

Since the Global Financial Crash, the sharing and gig economies have proliferated, with technology platforms disrupting how assets can be used (Killick, 2015). Key examples include Uber disrupting existing private hire and taxi sectors and Airbnb enabling homeowners to share 'excess' capacity in their property for a short period. These platforms have been 'embraced' by Governments and commentators globally as a new route to increasing economic opportunities, Crommelin *et al.* (2018) identify that supporters argue the sharing economy supports the 'redistribution of wealth' and 'growth of social capital'. However, critics argue that this narrative by supporters of the sharing economy ignores that to participate and be active, one must already own an asset (Wachsmuth & Weisler, 2018).

Since being set up in 2007 in San Francisco and operating in the UK since 2009, Airbnb has become a global platform and dominates the home-sharing market with millions of nights booked through the platform every year (Guttentag, 2015; Zervas *et al.*, 2017). The premise of Airbnb as a platform is to enable home-owners to let out their spare space, whether an extra bedroom or the entire home/apartment, as an STR (Oskam & Boswijk, 2016). 'Hosts' can share their space through three different types of listings: private rooms, shared rooms, and entire homes/apartments (Airbnb, 2016). The platform achieves income by charging a small percentage fee from both the host and guest. Airbnb, in their branding, promote the positive narratives of the sharing economy, and they argue that their platform supports 'inclusive and sustainable travel' and 'economically empower millions to unlock and monetize their spaces' (Airbnb, 2019).

Critics, however, argue that Airbnb hides behind the positive metaphors for the sharing economy and rather facilitates tourism access to an asset that was conventionally used for long-term housing (Crommelin *et al.*, 2018; van Doorn, 2020). Especially as Airbnb has now made it easier and more profitable for landlords to choose the short-term holiday let market over the longer-term rental market, resulting in the removal of housing stock from private rental markets (Barron *et al.*, 2021; Gurran & Phibbs, 2017). Therefore, platforms such as Airbnb are argued to encourage further financialisation of housing stock (Ferreri & Sanyal, 2018), which bolsters the prevailing property ownership forces instead of empowering homeowners to utilise their underused assets in a true sense of the sharing economy (Killick, 2015). Furthermore, these platforms can negatively affect local communities due to 'tourism' gentrification, where residents are displaced by tourists and visitors (Cocola Gant, 2016; Gotham, 2005; Grisdale, 2021).

The impact of the shift towards short-term lets over residential rentals has been experienced globally (Dogru *et al.*, 2020; Gil & Sequera, 2020; Gutiérrez *et al.*, 2017; Oskam, 2020). While there has been significant focus on the disruption to tourism industries, there has been increasing focus on the dynamics of housing markets and these platforms. These studies indicate that this is a global city issue, with the use of these platforms instigating displacement and gentrification of certain neighbourhoods (Amore *et al.*, 2020; Cocola Gant, 2016; Wachsmuth & Weisler, 2018), and increased STRs is associated with increases in long-term rental and property prices (Barron *et al.*, 2021; Garcia-López *et al.*, 2020; Horn & Merante, 2017; Yrigoy, 2019).

These effects have a geographical context, with the STRs usually clustered in hyper-localised areas, especially those with high tourist demand (Alizadeh *et al.*, 2018; Grisdale, 2021). With emerging evidence identifying that these platforms are enabling 'tycoons' to build 'empires' of Airbnb properties across cities (Oskam, 2019).

These impacts have brought the sector into direct conflict with policymakers at local and national levels, with different cities and countries taking diverging approaches to regulating short-term letting activity (Nieuwland & Van Melik, 2020). For example, in Berlin, where substantive commercial operating of Airbnb apartments has been identified (Schäfer & Braun, 2016), lawmakers introduced the 'Zweckentfremdungsverbot' in 2016, banning the short-term rental of entire properties. This was later repealed in 2018, with property owners able to let out the property up to 90 nights per year. Nieuwland and Van Melik (2020) provide a meaningful comparison of regulation of Airbnb activity across European and American cities. The authors identify that while regulations are aimed at reducing adverse effects for communities, the enforcement of regulations is difficult, but there is no one-size-fits all approach due to different dynamics and local contexts.

In the UK and specifically London, the focus of this paper, the concerns on the impact of Airbnb have been acutely drawn into focus along different party lines. Labour MPs have attempted to bring forward legislation to require Airbnb 'hosts' to be registered, in contrast, the Conservative Governments have continued their support for self-regulation of the sector. Following the *Deregulation Act 2015,* STRs was made legal in London for up to 90 nights per year without requiring planning permission.

Despite this limit, there is evidence that hosts have engaged in routine short-term letting for longer than 90 nights per year (Simcock & Smith, 2016). In late 2016, Airbnb introduced a 90-night limit for whole properties in London on their platform, which would only be lifted with the provision of evidence of planning permission. Yet, a recent investigation by the BBC identified that agencies and landlords bypassed the controls introduced by Airbnb, to deliberately 'flout' the 90-night limit and engage in short-term letting activity above 90 nights without planning permission (Lynn, 2019). Local Authorities across London have faced significant challenges in terms of funding and technology to effectively regulate and enforce against short-term let landlords (Ferreri & Sanyal, 2018). This has led to increased calls for further regulatory and fiscal action against those using housing stock for long-term STRs. To develop appropriate policy responses, there needs to be further understanding of how properties are being let and by *whom*. In providing information on the who not only will we further the understanding of the housing stock ownership dynamics in this sector, but it may provide solutions to developing a policy response.

4. Examining the London short-term let market on Airbnb

This paper aims to develop a greater understanding of how housing stock is being used as short-term lets in London and to an extent by whom. The above review has shown a wide range of incentives for the transfer of housing stock from long-term letting to short-term letting, including the financial incentives due to short-term letting presenting a 'rent gap' encouraging the reallocation from LTR to STR with minimal financial investment needed. Furthermore, there are certain policy changes and distinctions that could act as further incentives and drivers. The extant literature on the rise of Airbnb and other similar platforms has identified private landlords are globally regularly engaging in the use of these platforms. To develop a more in-depth understanding of these issues, this paper presents an empirical assessment of the trends in listings on the platform in London and examine the 'hosts' of these properties.

There are certain well-recognised complexities to extract and explore data relating to Airbnb (Alizadeh *et al.*, 2018; Crommelin *et al.*, 2018; Gurran & Phibbs, 2017; Wachsmuth & Weisler, 2018). Unfortunately, Airbnb restricts access to data on the use of their platform, and thus, to understand this phenomenon, we rely on other third parties to access datasets.

Two main sources provide web-scraped data on Airbnb that have been used in various analyses. Firstly, there is AirDNA, a for-profit organisation, and InsideAirbnb, a non-profit activist group set up to provide data freely on the use and reach of this platform. For this research, two data sources were utilised, data for 2014 was accessed through tomslee.net, and the rest of the data was accessed from InsideAirbnb due to the free and open-access nature of the datasets. This provider has been used for multiple similar analyses both in the UK and globally (Gurran & Phibbs, 2017; Horn & Merante, 2017; Simcock, 2017).

The secondary data were analysed across five time periods, May 2014 and the April's of 2015 to 2019. This served to enable a comparison between the number of listings across five years and permit analyses that would help uncover trends in the types of hosts using the platform. The data from InsideAirbnb provides a cross-sectional lens on the current listings at the time of data collection at a Greater London level and is filterable down to the borough level. The datasets provide a wealth of data for each listing, including (but not limited to): details about the host, location of the listing, price and the type of property, whether the host has multiple properties, the availability of the property, and details about the number of reviews the listing has.

It is important to note that there are certain limitations with the use of this secondary data. Firstly, this data is cross-sectional; therefore it only provides a limited view of the listings on Airbnb on a specific date. There is also the potential for listings to be outdated, where the host is no longer offering the property out for rental but has not removed the listing from the platform. Furthermore, Airbnb redesigned their platform calendar system in 2014; therefore, it has been impossible to know whether a listing has been booked or is simply unavailable for a specific night (Crommelin *et al.*, 2018). This could, therefore, under-estimate the number of nights a popular listing is shown as available over the course of the next 12 months. Notwithstanding these limitations, similar analysis of data from these sources have previously been undertaken and have aided the development of understanding internationally of how housing stock is being offered on this platform. In this paper, we build upon these foundations and examine how the stock is being used to an extent by whom.

4.1. How has the short-term let market changed?

Table 1 shows the breakdown of listing types in London and the annual percentage change and percentage change compared to 2014. The table shows that post-2015, in line with the legalisation of short-term lettings with the *Deregulation Act 2015*, there was a noteworthy increase in annual growth across all listings. However, this growth slowed in 2018 and even further in 2019. While it is not possible to ascertain reasons for this slowdown from the data, this would align with the introduction of self-regulation of the 90-night limit by Airbnb. This may have had a limiting effect on properties entering this market, or the market may be reaching a saturation point for available properties/type of listing. This slowdown is more pronounced for private and shared room listings. While there has been a slow-down in annual growth for the number of entire property listings for 2018 and 2019, this listing type was growing stronger in 2018 and 2019 than other listing types, had the highest growth since 2014, and entire property listings now account for a more significant market share. The entire property listings are of particular importance for this paper due to the potential for these listings to be displacing or preventing a household from accessing long-term housing.

Table 1 identifies that the entire property type of listing has experienced substantial growth since 2014 (571% increase) and now accounts for nearly 45,000 houses listed on Airbnb in London. Given this strong growth, and while growth appears dampened post-2017 and self-regulation, there seems to be a continued appetite for entire properties to be offered as a short-term let.

4.2. Exploring the hosts of Airbnb listings in London

Table 2 shows the number of all listings provided by hosts with multiple listings and provides a breakdown of entire property listings that are provided by hosts with multiple entire property listings. This breakdown is essential to provide a better indication of potential commercial letting activity, based on the following assumption. It is assumed that there is a probability that a host with an entire property listing

Table 1. Total number of listings in London per year with breakdown by listing type, annual growth (%) and growth in comparison to 2014 (%).

	2014	2015	2016	2017	2018	2019
All listings	13,327	18,436	32,646	55,563	70,533	79,761
Annual % growth		*38%*	*77%*	*70%*	*27%*	*13%*
% Growth in comparison to 2014			*145%*	*317%*	*429%*	*498%*
Shared room listings	185	293	490	738	730	738
Proportion of all listings (%)	1%	2%	2%	1%	1%	1%
Annual % growth		*58%*	*67%*	*51%*	*−1%*	*1%*
% Growth in comparison to 2014			*165%*	*299%*	*295%*	*299%*
Private Room Listings	6,421	8,480	15,189	26,983	32,246	34,470
Proportion of all listings (%)	49%	46%	47%	49%	46%	43%
Annual % Growth		*32%*	*79%*	*78%*	*20%*	*7%*
% Growth in comparison to 2014			*137%*	*320%*	*402%*	*437%*
Entire home/Apartment listings	6,631	9,663	16,967	27,842	37,557	44,463
Proportion of all listings (%)	50%	52%	52%	50%	53%	56%
Annual % growth		46%	*76%*	*64%*	*35%*	*18%*
% Growth in comparison to 2014			*156%*	*320%*	*466%*	*571%*

Table 2. Examination of listings (all listings and entire property listings) provided by hosts with multiple listings 2015–2019.

	2015	2016	2017	2018	2019
All listings	7,532	11,255	23,365	31,400	37,657
Proportion of all listings (%)	41%	34%	42%	45%	47%
Annual % growth		*49%*	*108%*	*34%*	*20%*
% Growth in comparison to 2015			*210%*	*317%*	*400%*
Entire home/Apartment listings	3,385	5,415	9,952	15,105	19,630
Proportion of all entire home/ Apartment listings (%)	35%	33%	36%	40%	44%
Annual % growth		*60%*	*84%*	*52%*	*30%*
% Growth in comparison to 2015			*194%*	*346%*	*480%*

and a private room listing could be offering the same residence on the platform, and there could be genuine 'home-sharing' activities with the residence still providing long-term housing to the host. However, where there are hosts with two or more entire property listings, there is a greater probability of commercial letting activity and not genuine 'home-sharing'. The findings demonstrate that there has been substantial growth in entire properties operated by a potential commercial host, and now 44% of all entire properties are likely operated by a commercial host.

Tables 3 and 4 show the number of listings and hosts by host portfolio size (portfolio size is adapted from the English Private Landlord Survey 2018 (MHCLG, 2019b)) for 2015 and 2019. Table 3 shows the breakdown for all listings, while Table 4 provides the breakdown for only entire property listings. These tables offer several important insights into the operation of the Airbnb market in London. Since 2015, multi-host listings have increased annually and now account for a greater share of the market. As identified from Table 1, while there has been a dampening in annual growth post-2018, there was more robust annual growth for entire property listings offered by hosts with multiple entire property listings in comparison to all listing types. This suggests a greater influx of 'commercial' entire property listings into the Airbnb market.

Further analysis of the data identified a 30% increase in the number of entire property listings provided by hosts with multiple listings between 2018 and 2019. This is compared to the 18% growth for all entire property listings and 11% growth

Table 3. Examination and comparison of host portfolio size for all listings 2015 to 2019.

	2015		2019		% Change	
Portfolio size	No. of Hosts (% of all Hosts)	No. of Listings (% of all Listings)	No. of Hosts (% of all Hosts)	No. of Listings (% of all Listings)	No. of Hosts	No. of Listings
1	10,904 (84%)	10,904 (59%)	42,014 (82%)	42,014 (53%)	285%	285%
2 to 4	1,884 (14%)	4,424 (24%)	7,742 (15%)	18,312 (23%)	311%	314%
5 to 9	167 (1%)	1,063 (6%)	893 (2%)	5,619 (7%)	435%	429%
10 to 24	75 (0.6%)	1,049 (6%)	382 (1%)	5,611 (7%)	409%	435%
25 to 100	23 (0.2%)	890 (5%)	136 (0.3%)	5,692 (7%)	491%	540%
More than 100	1 (0.01%)	106 (1%)	9 (0.02%)	2,423 (3%)	800%	2186%
Total 'Multi-hosts'	*2,150 (16%)*	*7,532 (41%)*	*9,160 (18%)*	*37,657 (47%)*	*326%*	*400%*

Table 4. Examination and comparison of host portfolio size for Entire Property/Apartment listings 2015 to 2019.

	2015		2019		% Change	
Portfolio size	No. of hosts (% of all hosts)	No. of listings (% of all listings)	No. of hosts (% of all hosts)	No. of listings (% of all listings)	No. of hosts	No. of listings
1	6,278 (90%)	6,278 (65%)	24,833 (88%)	24,833 (56%)	296%	296%
2 to 4	526 (8%)	1,277 (13%	2,379 (8%)	5,787 (13%)	352%	353%
5 to 9	86 (1%)	559 (6%)	520 (2%)	3,347 (8%)	505%	499%
10 to 24	57 (1%)	799 (8%)	255 (1%)	3,733 (8%)	347%	367%
25 to 100	16 (0.2%)	644 (7%)	105 (0.4%)	4,480 (10%)	556%	596%
More than 100	1 (0.01%)	106 (1%)	8 (0.03%)	2,283 (5%)	700%	2054%
Total entire property 'Multi-hosts'	*686 (10%)*	*3,385 (35%)*	*3,267 (12%)*	*19,630 (44%)*	*376%*	*480%*

for entire property listings where the host only has one listing. This suggests a substantially higher growth for this listing type and suggests continued commercial appetite in this market despite the self-regulation imposed by Airbnb.

These tables provide a new understanding of the types of hosts operating in London on Airbnb, specifically the portfolio sizes of hosts. Table 3 identifies that while most multi-hosts in 2019 have 2 to 4 listings, those who have five or more listings account for slightly more listings (24%). In Table 4, however, this is more acute with hosts with five or more entire property listings accounting for 31% of these compared to the 13% from hosts with 2 to 4 listings. Table 4 further shows that there has been strong growth for entire property hosts with 25 or more listings, and these hosts account for a quarter of all entire property listings. While these are unlikely to be individual landlords or property owners and are probably more likely to be agents due to the work required to offer short-term lets, these findings show the growing commercial nature of 'sharing' activity in London. There is also the possibility that some of this growth could be attributed to some existing 'non-sharing' commercial holiday let properties in London being advertised on the platform as the platform became more popular.

12% of hosts provide 44% of entire property listings on a likely commercial basis and raises the question of whether these lettings fit within the definition of the sharing economy or whether this is continuing the commodification of housing stock. The data presented in the above tables, however, does not indicate whether these properties are being used for the long-term on this platform. It is possible that a homeowner may enlist the services of an established management agency to manage the short-term letting while the homeowner is away. The next section focuses on property/listing availability to further investigate the extent to which properties are being let used on a commercial basis.

4.3. To what extent are properties available for the long-term?

To understand the extent to which properties are available for the long-term on the short-term let market, we examine the availability for 90 nights or more to provide a further distinction on potential commercial letting activity over 'sharing' excess capacity in the property. This is based on the assumption that a property being 'shared' when the host is away would only be available on the platform for a limited number of nights per year. On the other hand, long-term availability is, therefore, a likely indication that the property is not being used to share excess capacity but is rather commercial activity. As discussed previously, Airbnb changed the calendar system, which means we cannot now compare booked and unavailable days. Hence, this analysis may underestimate the number of properties that are being used for commercial purposes, as highly popular properties could already be booked.

Table 5 shows that since 2015 there has been continued annual growth in the number of listings available for 90 nights or more, with annual growth being stronger for entire property listings. In 2019, entire property listings accounted for 56% of all listings available for 90 nights or more and 41% of all entire property listings. This indicates a large proportion of listings that could be identified as likely to be traditional holiday-lets rather than occasional short-term rentals.

Table 6 summarises the number of listings and number of hosts by portfolio size for only entire property listings and where the listings have availability for over 90 nights or more. It is important to note, this only indicates the number of listings in a portfolio that are available for more than 90 nights. Therefore, some hosts, as identified as having one listing available for more than 90 nights, could have other properties but are available for less than 90 nights. Further analysis identified 459 hosts with multiple properties but only one property available for more than 90

Table 5. Number of listings (all listings and entire property listings) available for 90 nights or more, annual percentage change, and percentage change size 2015.

	2015	2016	2017	2018	2019
All listings	15,905	21,221	29,588	32,359	32,906
Proportion of all listings (%)	86%	65%	53%	46%	41%
Annual % growth		*33%*	*39%*	*9%*	*2%*
% Growth in comparison to 2015			*86%*	*103%*	*107%*
Entire home/Apartment listings	8,215	10,841	13,666	16,554	18,293
Proportion of all entire home/ Apartment listings (%)	85%	64%	49%	44%	41%
Annual % growth		*32%*	*26%*	*21%*	*11%*
% Growth in comparison to 2015			*66%*	*102%*	*123%*

Table 6. Entire Home/Apartment listings that are available for over 90 nights or more by host size 2015 and 2019.

Portfolio size of listings available more than 90 nights	2015		2019		% Change	
	No. of hosts (% of Hosts)	No. of listings (% of Listings)	No. of hosts (% of hosts)	No. of listings (% of listings)	No. of hosts	No. of listings
1	5,231 (89%)	5,231 (69%)	7,111 (79%)	7,111 (39%)	36%	36%
2 to 4	465 (8%)	1,133 (14%)	1,274 (14%)	3,203 (18%)	174%	183%
5 to 9	83 (1%)	543 (7%)	351 (4%)	2,269 (12%	323%	318%
10 to 24	52 (1%)	752 (9%)	175 (2%)	2,541 (14%)	237%	238%
25 to 100	14 (0.24%)	556 (7%)	69 (1%)	2,825 (15%)	393%	408%
More than 100	0	0	3 (0.03%)	344 (2%)	–	–
Total	5,845 (100%)	8,215 (100%)	8,983 (100%)	18,293 (100%)	54%	123%
Total entire property 'Multi-hosts' available >90 nights	*614 (11%)*	*2,984 (36%)*	*1,872 (21%)*	*11,182 (61%)*	*205%*	*275%*

nights. While the number of these listings have increased between 2015 and 2019, this is more pronounced for listings provided by a host with two or more property (275%) in comparison to the listings provided by a host with one property (36%). The findings identify that there has been a significant increase in the possible commercial use of housing stock over the four years on the short-term letting market in London, and specifically by those with a small portfolio of Airbnb properties.

Table 7 summarises the number of Entire Apartment/Home listings provided by hosts with multiple listings in 2015 and in 2019 by geographical region. This includes a split between Inner and Outer London and the 34 London Boroughs/Councils. In comparison to 2015 levels, there has been substantial growth in the number of listings across both Inner and Outer London. Most entire property listings are located within the Inner London boroughs/councils, specifically within Westminster, Kensington and Chelsea, and Camden. There is a concentration of entire property listings in tourist areas, as found in other global cities such as New York (Wachsmuth

Table 7. Number of Entire Apartment/Home Listings provided by hosts with multiple listings by geographical area within London in 2015 and 2019.

	2015	2019	
Area of London	No. of listings (% of all multi-host Listings)	No. of listings (% of all multi-host Listings)	% Change
Inner London	3,277 (97%)	16,982 (87%)	418%
Outer London	108 (3%)	2,648 (13%)	2352%
Barking and Dagenham	0 (0%)	30 (0.15%)	–
Barnet	3 (0.09%)	184 (0.94%)	6033%
Bexley	0 (0%)	27 (0.14%)	–
Brent	10 (0.30%)	458 (2.33%)	4480%
Bromley	4 (0.12%)	110 (0.56%)	2650%
Camden*	386 (11.40%)	2,005 (10.21%)	419%
City of London*	48 (1.42%)	291 (1.48%)	506%
Croydon	12 (0.35%)	157 (0.8%)	1208%
Ealing	16 (0.47%)	228 (1.16%)	1325%
Enfield	2 (0.06%)	65 (0.33%)	3150%
Greenwich*	11 (0.32%)	255 (1.3%)	2218%
Hackney*	219 (6.47%)	734 (3.74%)	235%
Hammersmith and Fulham*	239 (7.06%)	1,099 (5.6%)	362%
Haringey	7 (0.21%)	248 (1.26%)	3443%
Harrow	0 (0%)	52 (0.26%)	–
Havering	0 (0%)	49 (0.25%)	–
Hillingdon	4 (0.12%)	69 (0.35%)	1625%
Hounslow	6 (0.18%)	153 (0.78%)	2450%
Islington*	190 (5.61%)	1,169 (5.96%)	515%
Kensington and Chelsea*	599 (17.70%)	2,894 (14.74%)	383%
Kingston upon Thames	0 (0%)	35 (0.18%)	–
Lambeth*	108 (3.19%)	637 (3.25%)	490%
Lewisham*	35 (1.03%)	129 (0.66%)	*269%*
Merton	6 (0.18%)	140 (0.71%)	2233%
Newham	26 (0.77%)	309 (1.57%)	1088%
Redbridge	5 (0.15%)	57 (0.29%)	1040%
Richmond upon Thames	6 (0.18%)	155 (0.79%)	2483%
Southwark*	147 (4.34%)	886 (4.51%)	503%
Sutton	0 (0%)	9 (0.05%)	–
Tower Hamlets*	376 (11.11%)	1,778 (9.06%)	373%
Waltham Forest	1 (0.03%)	113 (0.58%)	11,200%
Wandsworth*	86 (2.54%)	676 (3.44%)	686%
Westminster*	833 (24.61%)	4,429 (22.56%)	423%
Total	3,385	19,630	480%

*Inner London Borough/Council.

& Weisler, 2018), Madrid (Gil & Sequera, 2020), Berlin (Schäfer & Braun, 2016), Toronto (Grisdale, 2021), and Sydney (Alizadeh *et al*., 2018).

5. Discussion and conclusions

The purpose of this paper has been to develop a greater understanding of how housing stock is being used as short-term lets in London and, to an extent, by who. The analysis set out in this paper has identified that there has been a rapid growth of activity on the Airbnb platform since 2014. Of particular importance for this paper is changes in the entire property listings due to the potential for these listing types to be displacing or preventing a household from accessing long-term residential housing. Between 2014 and 2019, there was a 571% increase in the number of entire property listings on Airbnb in London. Furthermore, the analysis identified that there had been substantial growth in the number of listings from hosts with more than one listing, and now 44% of all entire property listings are provided by one of these 'commercial' hosts.

The findings of this paper further contribute to our understanding of Airbnb host activity and portfolio size in London. 12% of hosts have more than one property and operate 44% of the market, with the number of these properties increasing by 480% between 2015 and 2019. The analysis in this paper further provides insight into the breakdown between different types of these likely 'commercial' hosts, identifying stark differences in the typologies and makeup of these hosts. Notably, the majority of these hosts are those with 2 to 9 properties. These are likely private landlords/investors and/or small agencies. In 2019, less than 0.5% of hosts operated over 25 properties as part of their portfolio. These are likely to be larger-scale agencies managing properties on behalf of owners and account for approximately 15% of all entire property listings. Promoters of the sharing economy put forward the concept of an authentic stay in someone else's home. This paper found a growth in listings provided by a commercial operator, with a small number of these operators providing a sizeable segment of the sector. This further confirms the arguments of previous authors (Barron *et al*., 2021; Crommelin *et al*., 2018; Ferreri & Sanyal, 2018; Grisdale, 2021) that significant amounts of activity on these platforms is not the authentic sharing of homes where the asset is being under-utilised; instead, it is commercial activity.

The analysis in this paper has further demonstrated the extent to which properties are being used on short-term letting platforms over longer-term residential lets in London. In 2019, 41% of all entire property listings were available for more than 90 nights. Digging deeper, 61% of entire property listings operated by a 'commercial' host were available for more than 90 nights per year. This indicated a considerable proportion of housing stock being used for commercial activity on these platforms, rather than activity in line with the 'sharing economy', equivalent to at least between 10,000 and 18,000 houses or apartments unavailable for longer-term residential letting. While this is only a small figure in comparison to the total housing stock of London, previous research has highlighted the clustered and geographical uneven nature of Airbnb letting with hotspots in areas with 'cultural capital' (Chica-Olmo *et al*., 2020; Jiao & Bai, 2020; Rae, 2017; Schäfer &

Braun, 2016; Wachsmuth *et al.*, 2018). In particular, the analysis in this paper identified a concentration of entire property listings provided by 'multi-hosts' in Inner London and specifically the three London boroughs/councils of Westminster, Kensington and Chelsea, and Camden. There has been a considerable growth in activity between 2015 and 2019 for these listings; Westminster experienced 239% growth, and Kensington and Chelsea experienced an increase of 254%. As other authors argue, this hyper-localised activity is likely to lead to displacement for communities in these neighbourhoods, with residents being replaced with tourists (Gil & Sequera, 2020; Grisdale, 2021). Furthermore, as multi-hosts are operating these listings, it is unlikely that local communities can access and realise the benefits of the sharing economy as intended, with housing inequalities further exacerbated.

This paper further argues that there are several reasons why private landlords may choose to operate their housing stock as STRs over LTRs. Building upon Wachsmuth and Weisler's (2018) work, who identified that platforms such as Airbnb offer a technological rent-gap, enabling landlords to earn higher rents with limited investment needed, this paper identifies the broader fiscal and regulatory changes to the PRS that could further explain this growth in this activity. The stronger regulative (and diverging) framework of the PRS across the UK delivering greater protection and affordability for private renters, along with increasing fiscal changes (such as the restriction of finance cost relief and the stamp duty levy), have caused concern for private landlords (Simcock, 2018). At the same time, the short-term let market has been untouched by the fiscal changes. Using the rent gap theory developed by Wachsmuth and Weisler (2018), it can be argued that the fiscal/regulatory changes for LTRs widen the gap in current profits for LTRs and achievable profits for STRs for landlords with larger property portfolios. More research is needed to examine and develop the theoretical framework for the interaction between policy, regulation, and local markets in terms of LTRs and STRs.

This paper provides further evidence on the commodification of housing stock and increasing housing inequalities. In line with the arguments of previous authors (for example Crommelin *et al.*, 2018), the growth in commercial activity rather than authentic sharing activity is in contrast to the narrative of the sharing economy's potential to redistribute wealth across communities. Rather this activity, where a sizeable segment of the STR is in the hands of a few operators, is likely to be 'reinforcing existing property ownership dynamics' (Ferreri & Sanyal, 2018, p. 3554) and furthering housing inequalities. This is especially prevalent in the marketing used by agencies that operate listings for landlords. Some have encouraged the eviction of longer-term renters for the higher profit offered by Short-term let markets (McKee *et al.*, 2019).

The findings of this paper pose several challenges and struggles for policymakers. They must grapple with the likely unintended consequence of policy changes to reduce investment in the PRS, but creating a level playing field with the existing holiday let industry in terms of fiscal policy could then negatively impact these tourism industries, which some communities survive off. At the same time, policymakers currently wish to increase homeownership, yet this phenomenon is likely creating competition for housing stock and furthering inequalities in housing ownership, which poses a challenge for how the government can support both homeownership and the sharing economy. There is a possibility through refining current planning regulation, in London, without planning permission, a host is only able to let out their property for short-term stays for up to a maximum of 90 nights per year (which Airbnb now self-regulates). As the evidence demonstrates, enforcement globally of Airbnb regulations is difficult (Ferreri & Sanyal, 2018; Nieuwland & Van Melik, 2020), and there is evidence of landlords in London breaching the 90-night rule. While tougher enforcement is needed, perhaps reducing the total number of nights an entire property can be let from 90 nights to 40 nights, alongside the introduction of a registration scheme could be a useful compromise between those wishing to share excess capacity in their home and preventing the loss of residential stock to the holiday let market for the long term. This could be devolved to local authorities to manage, set criteria and enforce, enabling local policymakers to address issues as they arise.

Further research is needed to understand the ownership of properties being listed on Airbnb and similar platforms. A key challenge is to quantify the number of multi-listed properties that are being sub-let. Simcock (2017) identified 7% of landlords had found their property on Airbnb without their permission. This activity where individuals rent out LTRs with the purpose of sub-letting onto Airbnb is currently difficult to quantify in certain localities. As subletting a property widens the rent gap, this is a concern as the subletter does not need the capital asset to offer the STR.

There are new models of private renting which merge both STRs with LTRs. In these forms, private renters can access the sharing economy platforms to share their space when available, with the profit going to both the landlord and the tenant. This seems to be an interesting development in supporting both residential and sharing economy sectors. This would be of key interest for future research to examine, especially, on affordability and availability of residential rental housing.

Finally, the Covid-19 pandemic has led to worldwide lockdowns and the cancellation of Airbnb bookings across the UK. There is a question on the impact of this pandemic on Airbnb 'commercial' hosts, whether the large-scale agents or the small landlord. There is emerging evidence that private rental markets have been 'flooded' with new properties (Simcock, 2020), with STRs reverting to LTRs (Calatayud, 2020). The broader impact of this will depend on the outcome of the pandemic and the length of time social distancing measures are in effect. It may be that some operators decide to sell their properties, while others permanently re-enter the residential sectors, or some temporarily switch to LTRs until tourist demand has returned. Nevertheless, the pandemic has further provided evidence on the extent to which properties had switched from residential property to STRs. This does provide policymakers with an opportunity to change policies and regulations in the meantime to keep properties available for residential rentals.

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